REMARKS

In the final Office Action dated January 23. 2009, the Examiner indicated that Applicant's arguments filed 10/9/08 were unpersuasive. Specifically, the Examiner asserted that the arguments presented were contradictory because measuring the curvature in the Peng reference means that the curvature cannot have been pre-known. It is unclear why the Examiner makes this assertion.

Applicant argued that the present invention teaches and claims a look-ahead scale factor that is a function of an "intended path radius of curvature". The intended vehicle path is a function of the "distance" of a look-ahead point in determining the look ahead scale factor, the distance being increased or decreased as a function of the rear side slip angle of the vehicle computer model. The intended path in the present invention is taught and described to be a driver's intended path and not necessarily the driver's attempt to follow the road. The present invention simulates the interaction between the driver and the vehicle dynamics. For example, expert drivers deal with vehicle limit handling in both understeering and oversteering situations where their steering objective may temporarily deviate from the "lane following" mode in order to maximize cornering force or stabilize the vehicle. The present invention accomplishes this by adjusting the look ahead point as claimed in the independent claims.

Under a normal driving condition, a driver would attempt to follow the road. Therefore, the driver model developed by Sharp and the autonomous steering controller disclosed in Peng both utilize preview and optimal control concepts and techniques that emulate a driver's lane following behavior using the road curvature information. The present invention is significantly different in that the driver model may intentionally deviate from the road. The intended path taught and claimed in the present invention may deviate from the road. This concept is not addressed in the Sharp and Peng references and in fact, both references teach away from path deviations that are not in accordance with the road curvature information.

The Peng reference uses "known" road curvature information to determine the path. The "known" information is determined by measurements provided from a variety of sources. However, it is respectfully asserted that the information used by Peng is not directed to an "intended path" as claimed in the present invention. The "known" road curvature information in

Peng is derived from the road. Furthermore, the preview time taught in Peng is finite, further indicating a limited "known" path as opposed to an "intended" path. Any measurement data in Peng is taken from the road geometry itself and not equivalent to the driver's intended path as it relates to rear side slip angle taught and claimed in the present invention.

Further support for this argument is found at page 3, fourth full paragraph of the Peng reference. The Peng reference teaches special on-board look-ahead sensors are required to implement the control algorithms. The preview information required pertains to road curvature and superelevation, which is measured from the road geometry or obtained from transportation agencies and not an intended path. In other words, it is respectfully asserted that the Peng reference assumes that the "intended" path is the actual path of the road curvature because it is based on actual road information.

The path information taught and claimed in the present invention is the driver's "intended" path, which, in reality, may or may not match the known, (either measured or sensed), road curvature. The "intended" path information taught in the present invention is directed to rear side slip angle relative to a predetermined threshold value used to determine a look-ahead scale factor that affects the distance of a look-ahead point to the intended vehicle path. This is significantly different that the "known" road curvature information measured from the road to determine the path as taught in the Peng reference.

Applicant's hope to have cleared up the Examiner's assertion of a "contradictory" argument relative to the Peng reference with the detailed explanation provided herein. It is respectfully requested the Examiner reconsider the final rejection of the claims, withdraw the rejection of claims 1-20 under 35 U.S.C. §103 and issue a formal Notice of Allowance.

CONCLUSION

Should the Examiner remain unconvinced by the explanation provided herein, he is invited to contact the undersigned attorney by telephone to further discuss possible claim amendments that may bring the claims into condition for allowance. If the USPTO determines that a fee is due, the Commissioner is hereby authorized to charge any fee to Deposit Account No. 06-1510.

Respectfully submitted,

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